PLANT AND SOIL

Contents Volume 214, Nos. 1/2 1999

Furrows, press wheels and wetting agents improve crop emergence and yield on water repellent soils
W.L. Crabtree and C.W.L. Henderson 1–8

Deep placement of Mn fertiliser on a sandy soil increased grain yield and reduced split seed in *Lupinus angustifolius*
W.L. Crabtree, 9–14

Non-destructive, stereological estimation of plant root lengths, branching pattern and diameter distribution
D. Wulfsohn, J.R. Nyengaard, H.J.G. Gundersen, A.J. Cutler and T.M. Squires 15–26

Biomass and distribution of fine and coarse roots from blue oak (*Quercus douglasii*) trees in the northern Sierra Nevada foothills of California
C.S. Millikin and C.S. Bledsoe 27–38

Alfalfa genotypes differ in their ability to tolerate zinc deficiency
H.S. Grewal and R. Williams 39–48

Relationship between rate of crop growth at date of fertiliser N application and fate of fertiliser N applied to winter wheat
F. Limaux, S. Recous, J.-M. Meynard and A. Guckert 49–59

Development and validation of a model to describe root length density of maize from root counts on soil profiles
J.L. Chopart and P. Siband 61–74

NIR spectroscopy, mineral nitrogen analysis and soil incubations for the prediction of crop uptake of nitrogen during the growing season
T. Börjesson, B. Stenberg, B. Lindén and A. Jonsson 75–83

Occurrence of *Tuber melanosporum* in relation to soil surface layer properties and soil differentiation
L. Lulli, G. Bragato and L. Gardin 85–92

Impact of synthetic sheep urine on N and P in two pastures in the Scottish uplands
B.L. Williams, C.A. Shand, S. Sellers and M.E. Young 93–103

Water-retentive polymers increase nodulation of actinorhizal plants inoculated with *Frankia*
S.J. Kohls, D.D. Baker, D.A. Kremer, J.O. Dawson 105–115

Emergence and seedling growth of soybean cultivars and maturity groups under salinity
D. Wang and M.C. Shannon 117–124

Soil CO_2 efflux in a beech forest: comparison of two closed dynamic systems
V. Le Dantec, D. Epron and E. Dufrêne 125–132

Ammonium and nitrate uptake by *Eucalyptus nitens*: effects of pH and temperature
T.P. Garnett and P.J. Smethurst 133–140

Boron accumulation and partitioning in wheat cultivars with contrasting tolerance to boron deficiency
K.D. Subedi, P.J. Gregory and M.J. Gooding 141–152

Solid-phase ^{31}P NMR spectra of peat and mineral soils, humic acids and soil solution components: influence of iron and manganese
C.A. Shand, M.V. Cheshire, C.N. Bedrock, P.J. Chapman, A.R. Fraser and J.A. Chudek **153–163**

Carbon isotope composition, water-use efficiency and biomass productivity of *Eucalyptus microtheca* populations under different water supplies
C. Li **165–171**

Causes of increased nutrient concentrations in post-fire regrowth in an East African savanna
C.A.D.M. Van de Vijver, P. Poot and H.H.T. Prins **173–185**

Effects of earthworms on biomass production, nitrogen allocation and nitrogen transfer in wheat–clover intercropping model systems
O. Schmidt and J.P. Curry **187–198**

Author index **199**

Instructions for authors **201–206**

Cover Photo: Growth chamber experiment on the role of earthworms in nitrogen relations in wheat-clover intercrops.
Plant and Soil Vol. 214, pp. 187–198.